EN

B100-SA
Standalone Biometric Reader

RTT
1 Relay Remote Unit
and request-to-exit Button

B100-SA-KIT Standalone Biometric Kit

User Manual

Contents

1.0 INTRODUCTION 2
2.0 MOUNTING 3
3.0 SPECIFICATIONS 3
4.0 APPLICATION DIAGRAM 4
5.0 WIRING 4
6.0 RECOMMENDED SWIPING TECHNIQUE 5
6.1 Tapping the sensor 5
6.2 Scrolling the sensor up and down 5
7.0 INDICATION 5
8.0 QUICK PROGRAMMING 6
8.1 Adding Master Finger and delete all users 6
8.2 Add User In Group 1 7
8.3 Add User In Group 2 7
8.4 Delete user 7
8.5 Delete All Users in Group 1 7
8.6 Delete All Users in Group 2 7
9.0 PAIRING - BIOMETRIC READER AND REMOTE RELAY UNIT 8
9.1 Pairing B100-SA with DINRTT 8
9.2 Pairing B100-SA with RTT 8
10.0 KEEP THE DOOR UNLOCK 8
11.0 B100-SA PROGRAMMING MENU 9
11.1 Adding Users 9
11.2 Delete User 10
11.3 Delete All users 10
11.4 Delete Group of Users 11
11.5 Add Administrator 12
11.6 Delete Administrator 13
11.7 Settings 14
11.7.1 Double Swipe Unlocks Door, Entry Mode, Remote Relay Touch Function 15
11.7.2 Buzzer Sound, Backlight, Reset to defaults 16
11.8 Set Door Relay Time 17

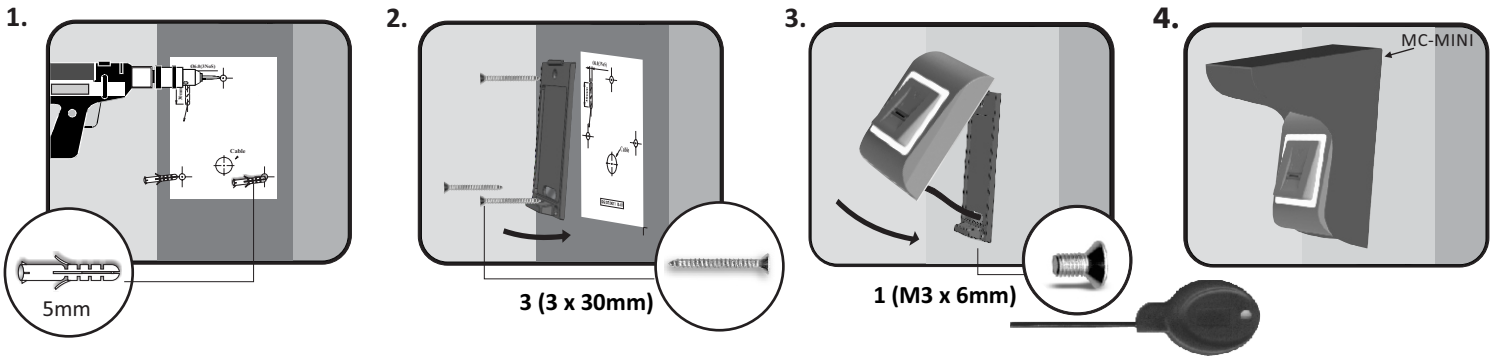
1.0 INTRODUCTION

B100-SA is a simple one-door standalone biometric system. The reader can store up to 97 finger templates, it has one relay output and one exit button input. If secure installation is needed, the reader can be connected to remote relay unit at secured area, which also plays the role of request-to-exit push button. Complete setup and programming can be done by scrolling and tapping on the sensor.

The sensor incorporates dedicated sensing hardware to facilitate the detection of “spoofing” attacks based on fake fingers. This data is embedded into the image data stream, and is processed on the processor. The system is capable of detecting and defeating well-known fake finger mechanisms, such as molded “gummy” fingers.

RTT is remote relay control unit for B100-SA(DINB100-SA) biometric reader. If secure installation is needed, the biometric reader can be connected to remote relay unit at secured area, which also plays the role of exit push button. It has one relay output and one exit button input.

2.0 MOUNTING



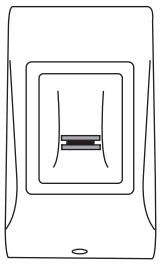
Do not install the device and cabling close to a source of strong electro-magnetic fields like radio-transmitting antenna.
Do not place the device near or above heating equipments.
If cleaning, do not spray or splash water or other cleaning liquids but wipe it out with smooth cloth or towel.
Do not let children touch the device without supervision.
Note that if the sensor is cleaned by detergent, benzene or thinner, the surface will be damaged and the fingerprint can't be entered.

If the biometric reader is installed and used outdoor, the reader MUST be fitted with the MC-MINI metal cover available in our accessories in order to protect the sensor from direct rainfall. The operating temperature of the product is between -20ºC - + 50ºC. If the reader is installed in an environment where the temperature can drop below -10ºC or/and if the sensor could only be exposed to direct sunlight, it is strongly recommended to install the reader inside a third party sealed wall mount box (fitted with additional heater if very low temperature) to keep a constant sensor level performance. XPR™ cannot guarantee the functionality of the product if measures and advice before are not followed.
It is also strongly recommended to use double technology biometric readers when use outdoor to offer first higher security but also the possibility to use different readers depending on users.

3.0 SPECIFICATIONS

SPECIFICATIONS B100-SA

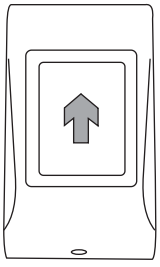
Fingerprint Capacity:	97 templates
Output:	1 x Relay (1 A /24V AC/DC)
Push Button Input:	Yes
Door Open Time:	Pulse (1, 3, 5, 10, 20, 30, 60sec) or Toggle(ON/OFF)
Entry Mode:	Finger
Programming:	By scrolling and tapping on the sensor or by keypad
Master/Admin Fingers:	1 Master and 2 Admin Fingers
Image resolution:	Up to 508 DPI
Backlight ON/OFF:	Yes
Buzzer ON/OFF:	Yes
Firmware upgrade:	via RS485 converter and windows application
Current Consumption:	100 mA max.
Power Supply:	9-14 V DC
Indication:	Tricolor Status LED and 4 x Programming LEDs
Mounting:	Surface mount
IP Factor:	IP65
Storage/Operating Temperature:	-20°C to +50°C
Storage/Operating Humidity:	5% to 93% RH without condensation
Dimensions(mm):	92 x 51 x 25



B100-SA

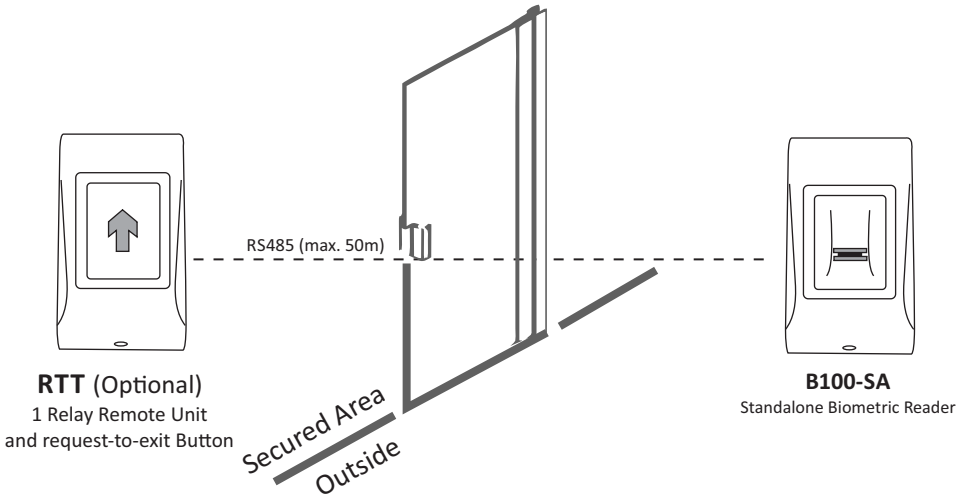
SPECIFICATIONS RTT

Output:	1 x Relay (2A/24V AC/DC)
Push Button Input:	1
Door Time:	Pulse (1 to 60sec) or Toggle (ON/OFF)
Backlight ON/OFF:	Yes
Buzzer ON/OFF:	Yes
Current Consumption:	60 mA
Mounting:	surface mount
IP Factor:	IP40 (indoor use only)
Operating Temperature:	-20°C to +50°C
Dimensions:	92 x 51 x 25

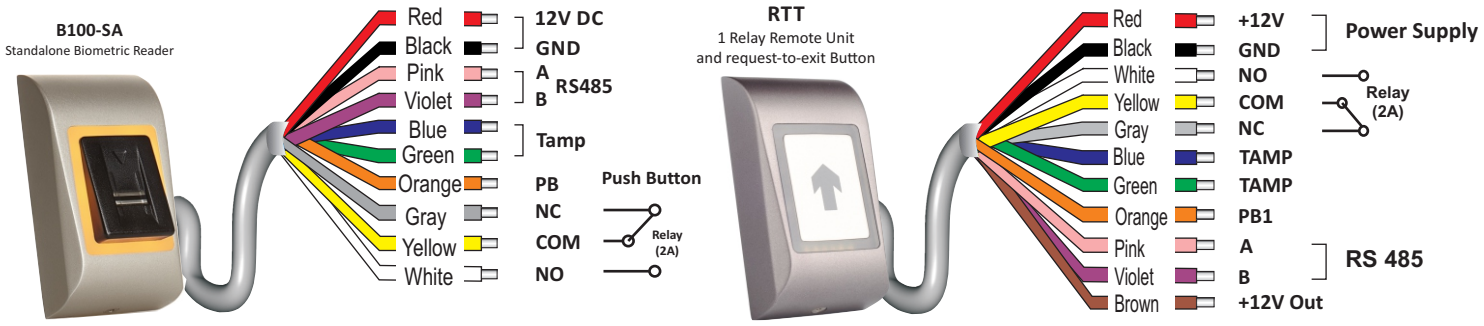


RTT

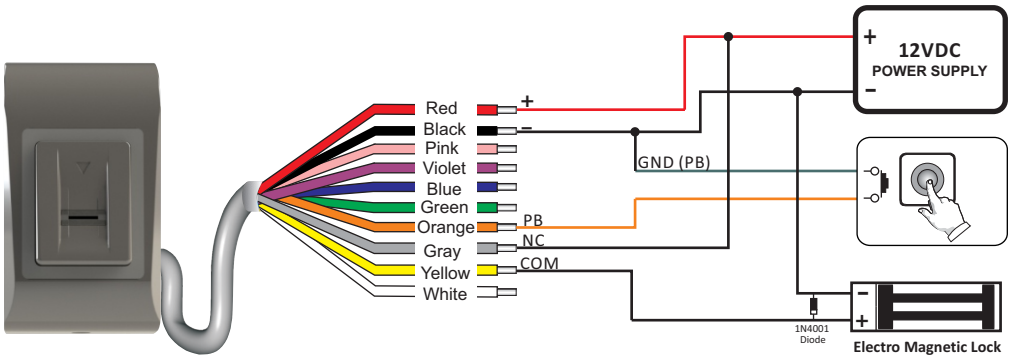
4.0 APPLICATION DIAGRAM



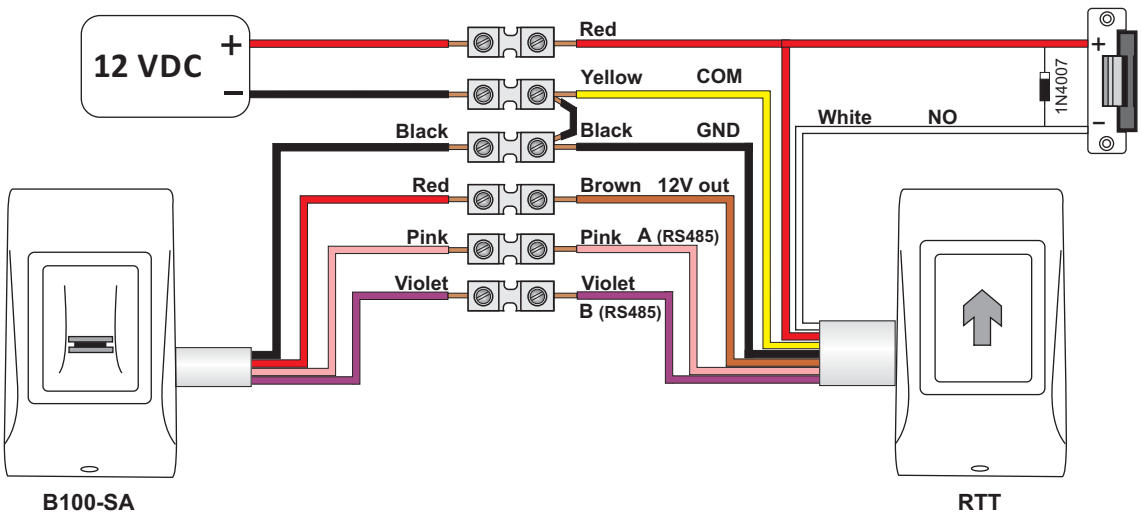
5.0 WIRING



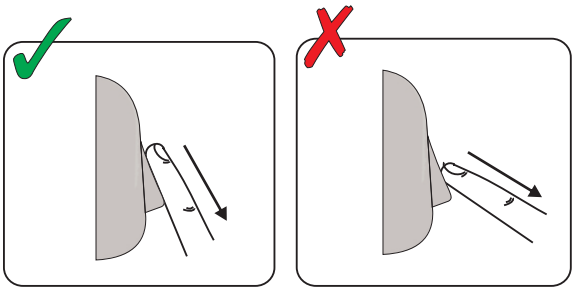
Wiring B100-SA



Wiring B100-SA + RTT (Remote Relay Unit)



6.0 RECOMMENDED SWIPING TECHNIQUE

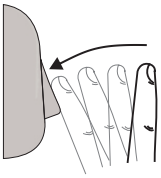


Follow the below instructions for correct finger swiping
Starting from the first finger joint, place the selected finger on the swipe sensor and move it evenly towards oneself in one steady movement.

Result:
For a valid swipe: Tricolour Status LED turns green + OK Beep(short + long beep)
For an invalid or misread swipe: Tricolour Status LED turns red + Error Beep (3 short beeps)

6.1 Taping the sensor

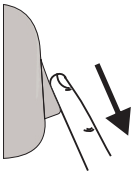
Tap the sensor to enter Submenu or to confirm a command



Enter and confirm

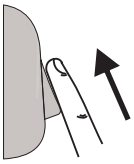
6.2 Scrolling the sensor up and down

Scroll the sensor DOWN to navigate the programming menu



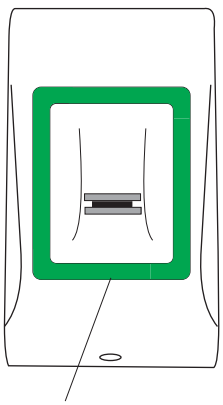
Navigate the Programming Menu

Scroll the sensor UP to exit the programming menu

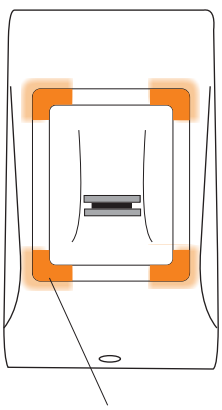


Exit the Programming Menu

7.0 INDICATION



Tricolor Status LED
Green - Access Granted
Red - Access denied
Orange - Idle Mode



4 x Tricolor Programming LEDs
(red, green, orange)

OK Beep - short + long beep
Error Beep - 3 short beeps
Swipe Again - 2 short beeps

8.0 QUICK PROGRAMMING

8.1 Adding Master Finger and delete all users

1.Push dip switch no.2 in position ON.

No.2

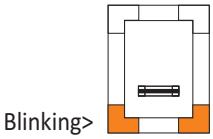
2.Reset the Power of the device.

3.Wait for One long + multiple short beeps

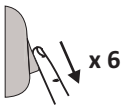
4.Put the dip switch in position OFF. (short beeps will stop)

No.2

5.Wait for the bottom row LEDs to blink in Orange.



6.Swipe the Master finger **min.6 times**. (Until Ok Beep)



Note: *After enrolling the Master finger the device will auto-Reset (wait for 7 seconds and the OK beep).*
Note: *This procedure also deletes all the users and administrators previously enrolled.*

1. There is 1 Master Finger. The master finger can enroll/delete user and all the other settings. The Master finger can be changed ONLY with the jumper.

2. There are 2 Administrator Fingers. The administrator can do all the things that Master can do. The Master can delete the Administrator, but the Administrator can not delete the Master.

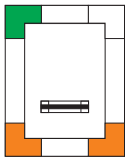
3. The User can be assigned to one of the 8 available User Groups. With the Quick programming feature, the Users are assigned in Group 1 or Group 2. For most of the installations 2 groups are enough and can be used as: Group 1 for permanent residents, Group 2 for guest and visitors.

4. The user can be deleted by swiping its user finger or by deleting the group in which that user is enrolled. Once the Group of users is deleted, all the users within that group will be deleted.

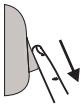
5. The Groups are not limited by the number of users. (ex. Group 1 can contain 20 users, Group 2 can contain 70 users, but the total number must remain bellow 97...)

8.2 Add User In Group 1

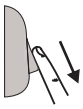
Figure.1



1. Swipe the Master or Admin Finger
2. Swipe the user finger min. **6 times** (until Ok Beep)



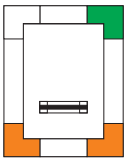
Master Finger x 1



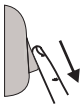
User Finger x 6

8.3 Add User In Group 2

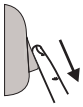
Figure.2



1. Swipe the Master or Admin Finger **twice**
2. Swipe the user finger min. **6 times** (until Ok Beep)



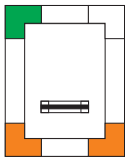
Master Finger x 2



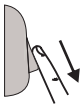
User Finger x 6

8.4 Delete User

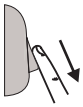
Figure.1



1. Swipe the Master or Admin Finger
2. Swipe the user finger (already enrolled)



Master Finger x 1



User Finger x 1

8.5 Delete All Users in Group 1

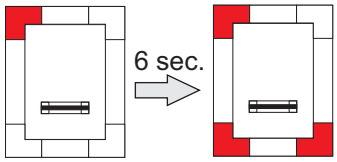
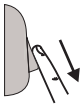


Figure.4

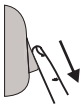
1. Swipe the Master or Admin finger **3 times**,
2. Wait **6 seconds** for the light pattern on figure.4
3. Swipe the Master or Admin finger **once more**

Note: All fingers that are enrolled in Group 1 will be deleted.



Master Finger x 3

wait 6 seconds



Master Finger x 1

8.6 Delete All Users in Group 2

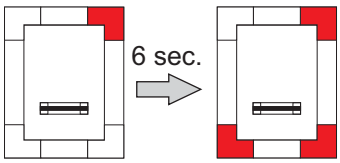
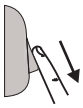


Figure.6

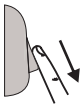
1. Swipe the Master or Admin finger **4 times**,
2. Wait **6 seconds** for the light pattern on figure.6
3. Swipe the Master or Admin finger **once more**

Note: All fingers that are enrolled in Group 2 will be deleted.



Master Finger x 4

wait 6 seconds



Master Finger x 1

If you make any mistake or you just simply want to **exit** Quick Programming, wait for the timeout of **10 seconds**.

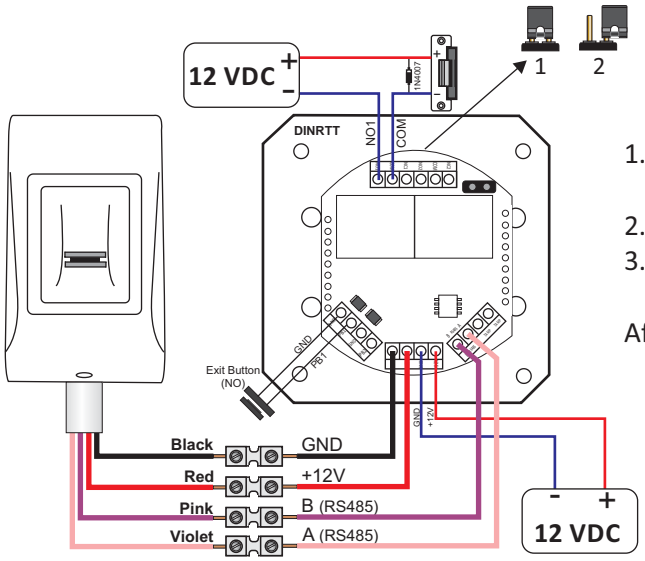
With this, the quick programming is completed. The system is now operational with default value for Door Open Time of **3 seconds.**

For more comprehensive programming, refer to the "**B100-SA Programming**" section.

9.0 PAIRING - BIOMETRIC READER AND REMOTE RELAY UNIT

If secure installation is needed, the reader can be connected to remote relay unit at secured area, which also plays the role of request-to-exit push button. Follow the instructions bellow to pair(couple) both devices or refer to the Remote Relay's Manual.

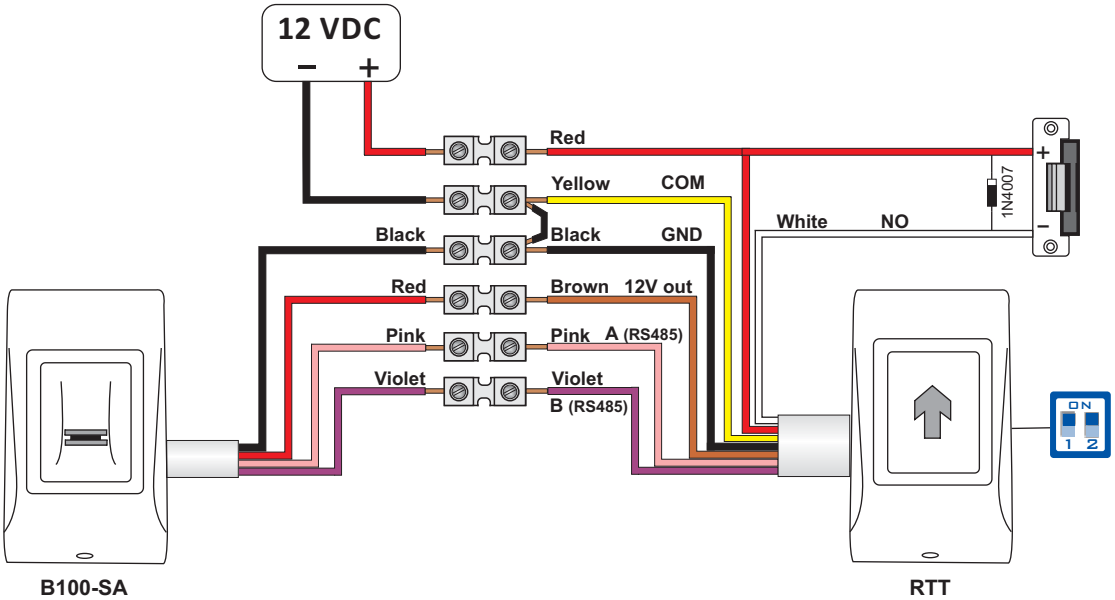
9.1 Pairing B100-SA with DINRTT



1. Close the Jumper. DINRTT beeps continuously and the red led blinks.
2. Open the Jumper
3. Wait for Beep + OK Beep (short + short + long beep)

After the OK beep, the coupling is done.

9.2 Pairing B100-SA with RTT

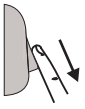


1. Put Dipswitch No.1 to position ON. RTT beeps continuously and the red led blinks.
2. Put Dipswitch No.1 to position OFF.
3. Wait for Beep + OK Beep (short + short + long beep)

After the OK beep, the coupling is done.

10.0 KEEP THE DOOR UNLOCKED

Swipe ANY enrolled finger twice (within 7 seconds) and the Door will stay unlocked, until valid finger is swiped.



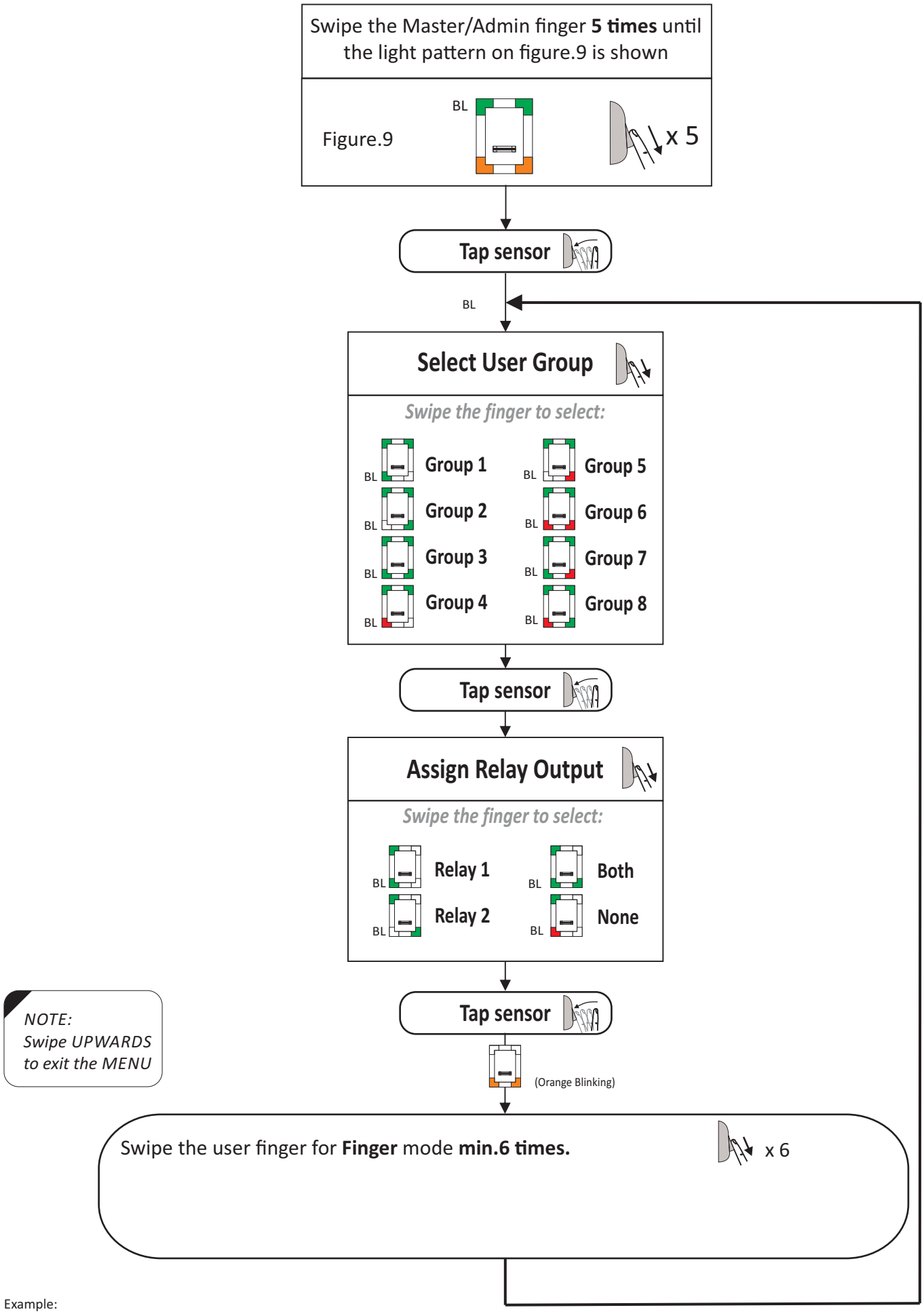
User Finger x 2

While the door is unlocked the tricolor status LED stays green.

To use this feature, enable the same from the menu.(page 15). It applies for product version 1.0.2.0.0 and above.
Note: Make sure that the door lock can withstand activation in longer periods.

11.0 B100-SA PROGRAMMING MENU

11.1 Adding Users

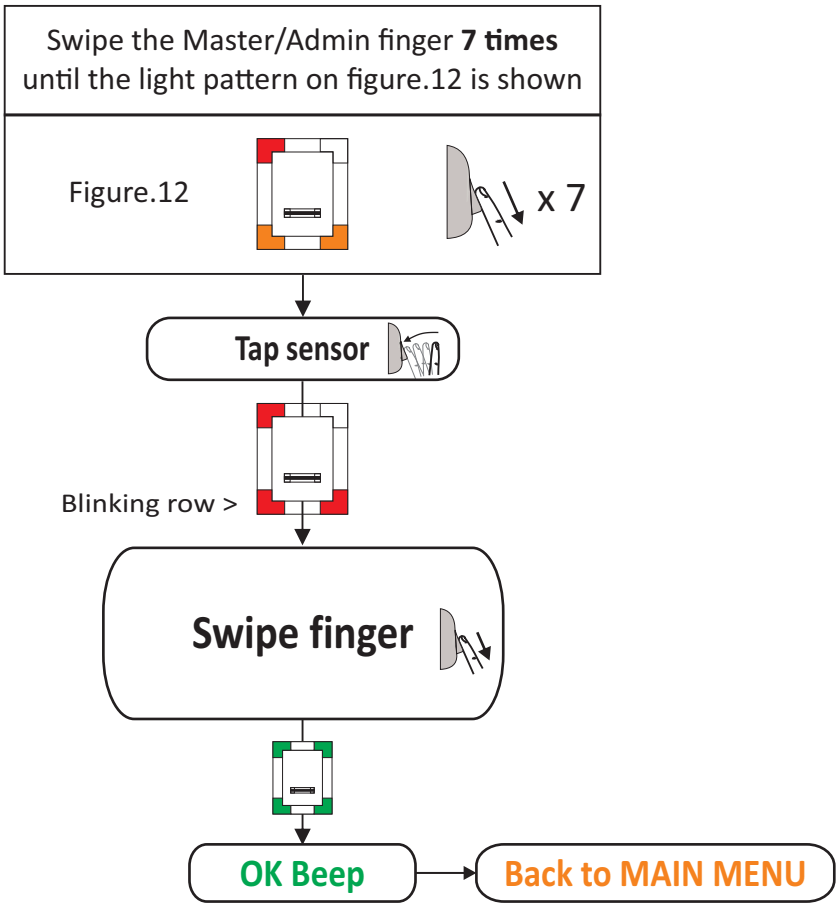


Example:
Task: Add a user in Group2, that will activate Relay1.

Scroll Master Finger 5 times, tap, scroll ones, tap, tap, swipe user finger 6 times, swipe UP to exit.

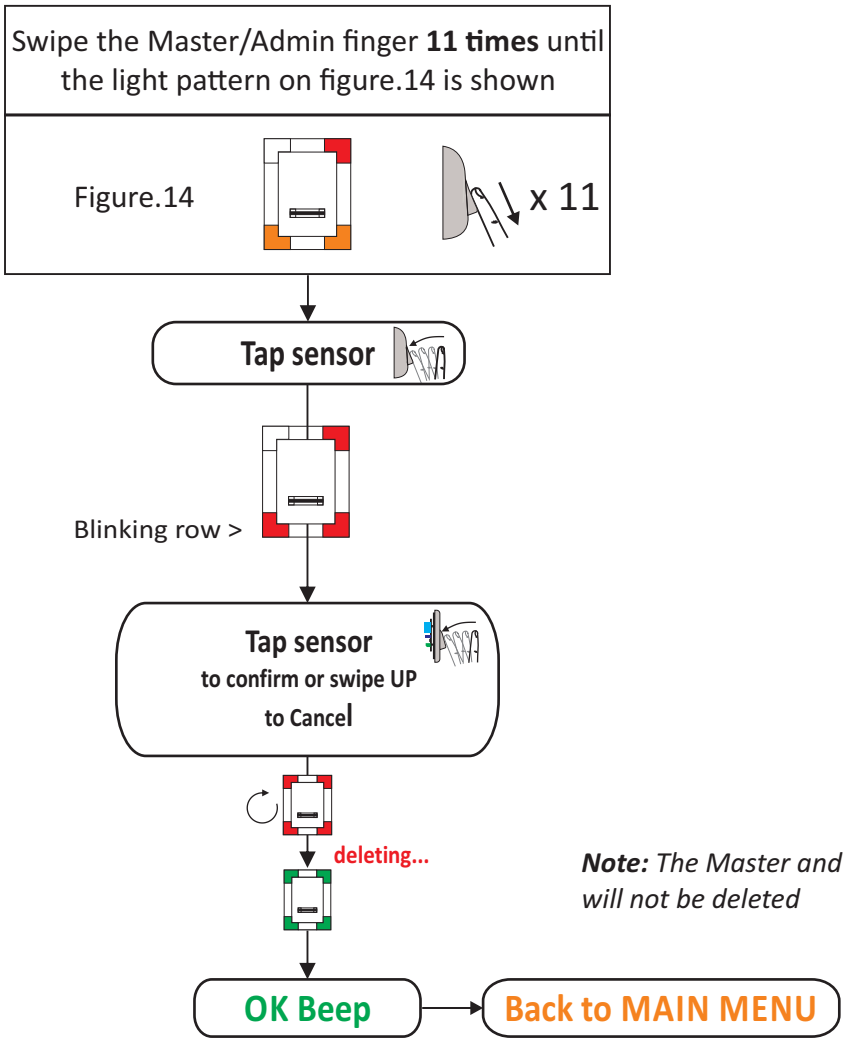
11.0 B100-SA PROGRAMMING MENU

11.2 Delete User



NOTE:
Swipe UPWARDS to exit the MENU

11.3 Delete All Users

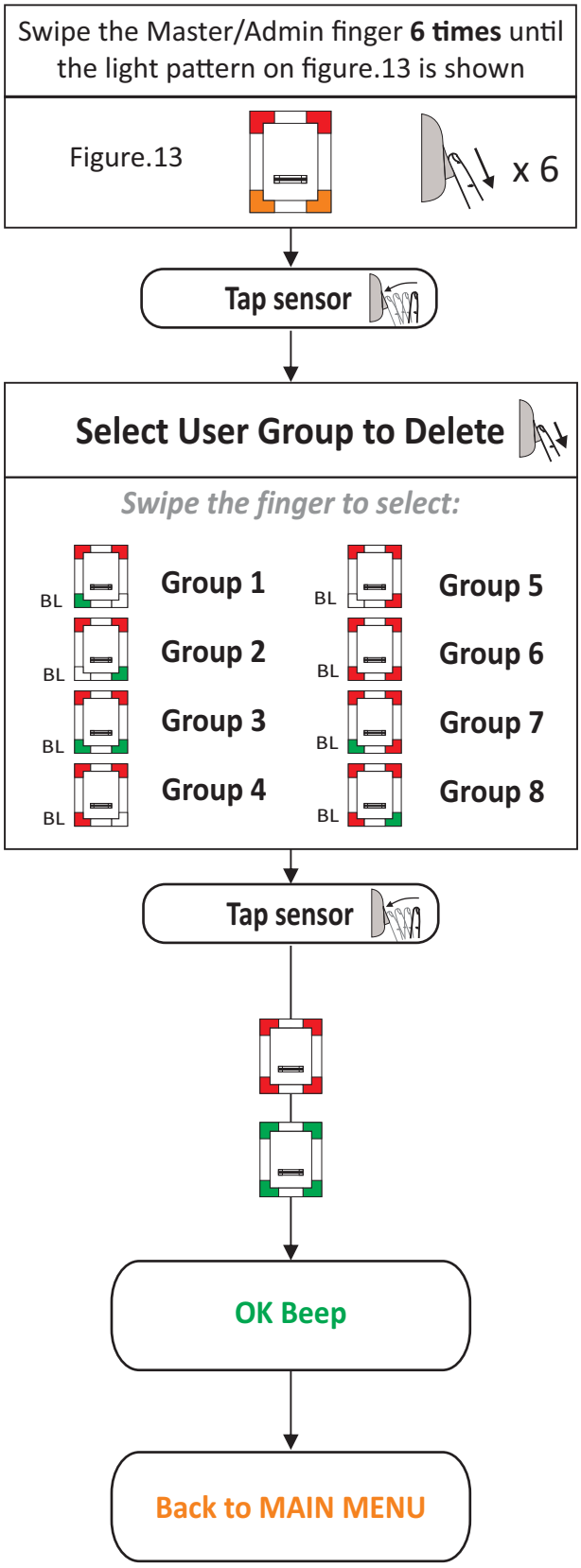


NOTE:
Swipe UPWARDS to exit the MENU

Note: *The Master and the Administrators will not be deleted*

11.0 B100-SA PROGRAMMING MENU

11.4 Delete Group of Users



NOTE:
Swipe UPWARDS to exit the MENU

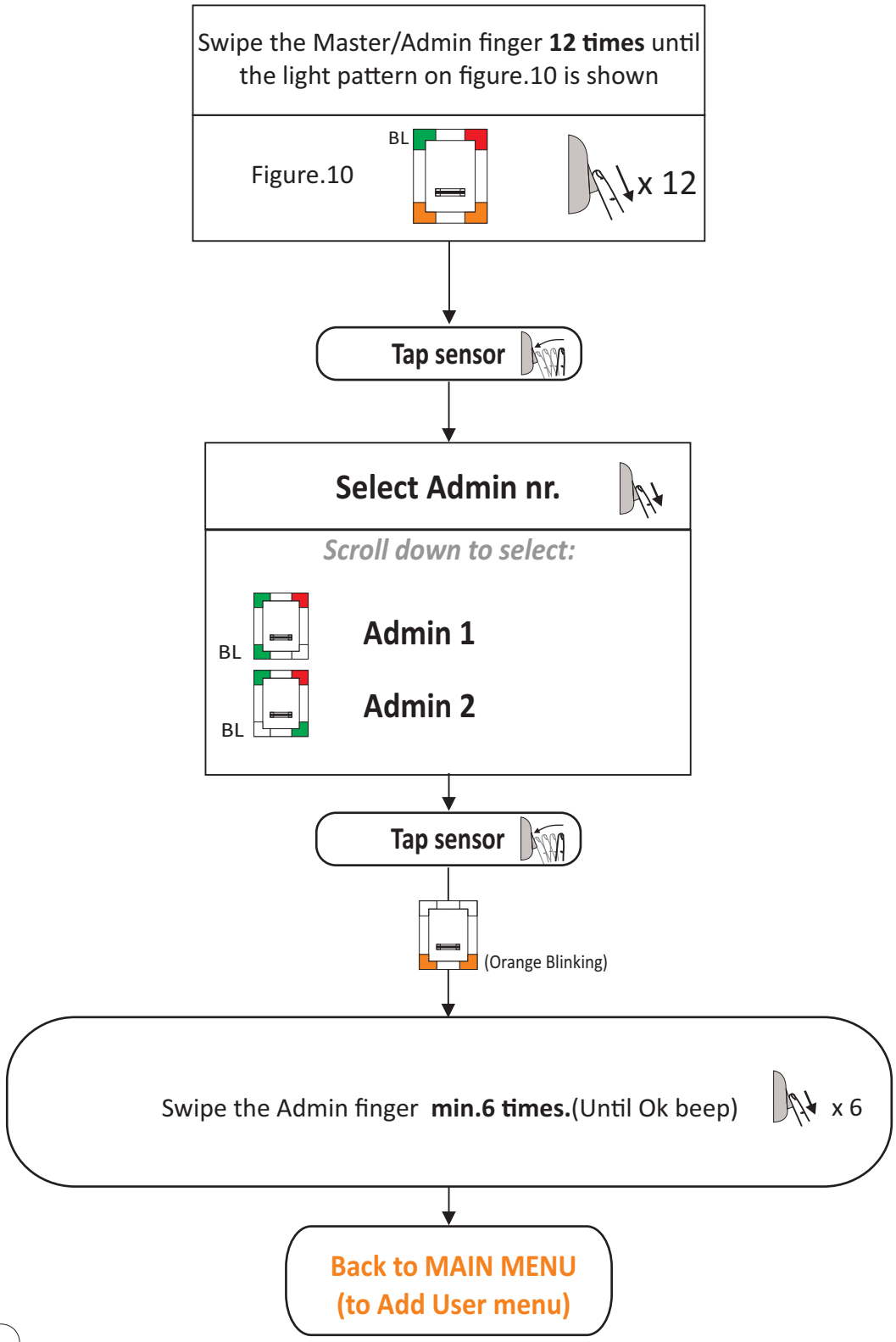
Note: *All fingers that are enrolled in the Group will be deleted.*

Example:
Task: Delete all users in Group3

Scroll Master Finger 6 times, tap, scroll twice, tap, swipe UP to exit.

11.0 B100-SA PROGRAMMING MENU

11.5 Add Administrator

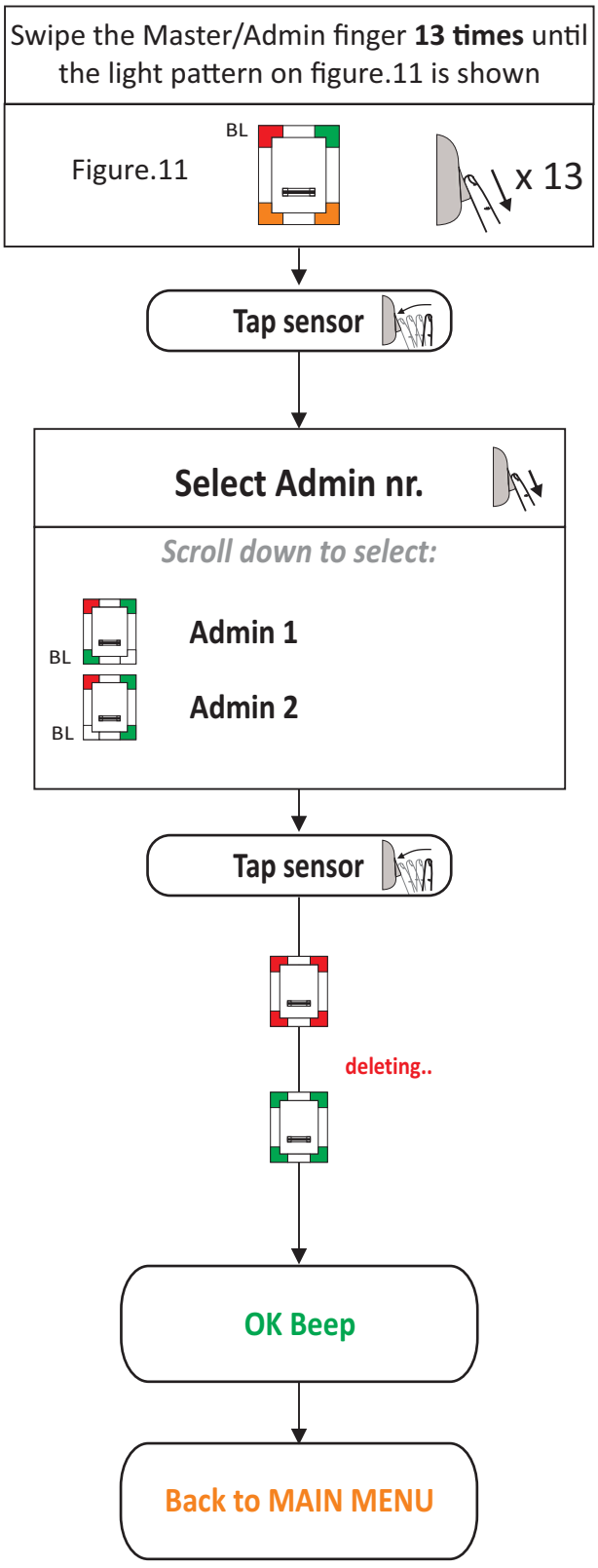


NOTE:
Swipe UPWARDS to exit the MENU

- There is 1 Master Finger. The master finger can enroll/delete user and all the other settings.
- The Master finger can be changed ONLY with the jumper.
- There are 2 Aministrator Fingers. The administrator can do all the things that Master can do. The Master can delete the Administrator, but the Administrator can not delete the Master.

11.0 B100-SA PROGRAMMING MENU

11.6 Delete Administrator

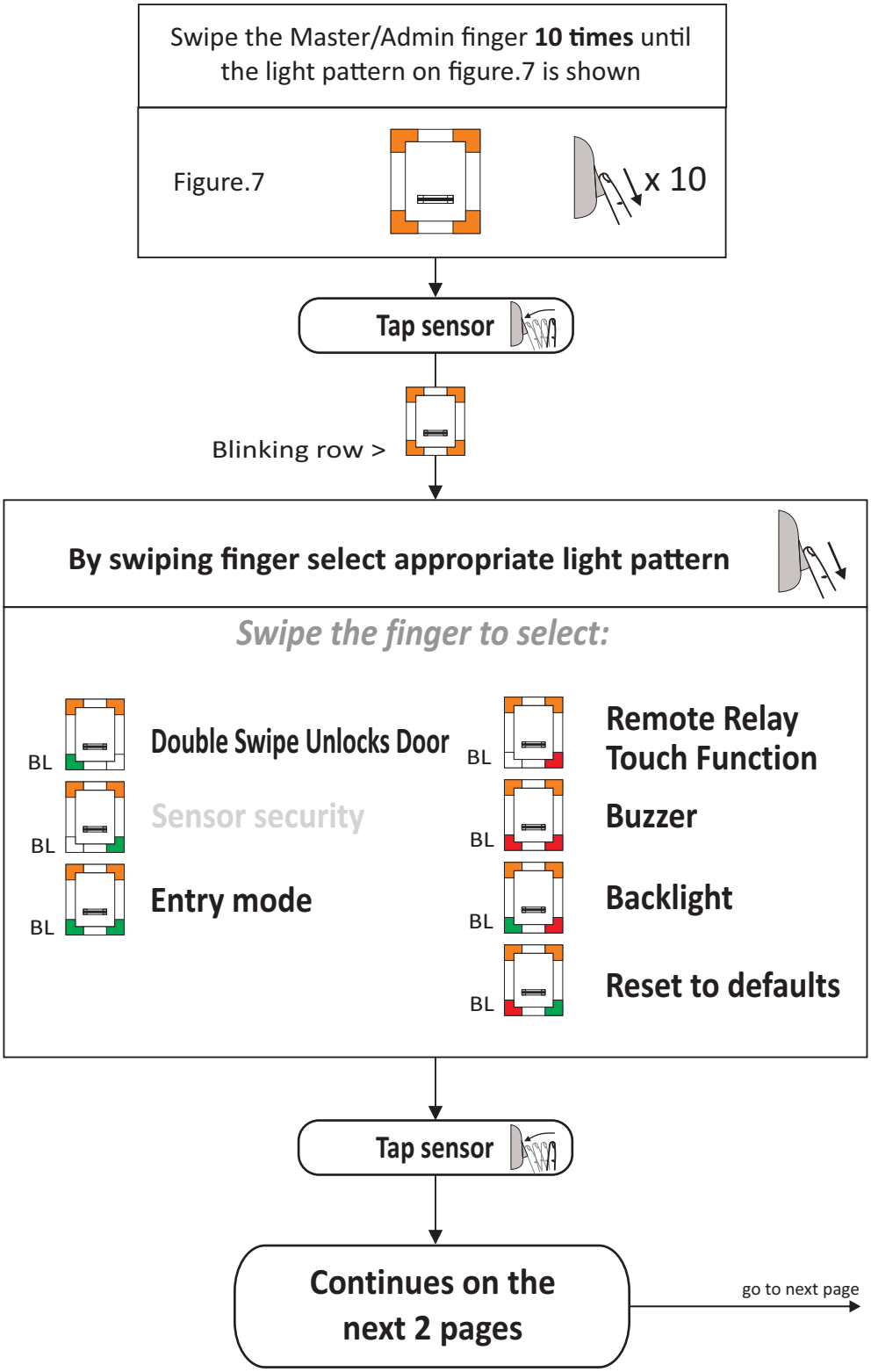


NOTE:
Swipe UPWARDS to exit the MENU

- There is 1 Master Finger. The master finger can enroll/delete user and all the other settings.
- The Master finger can be changed ONLY with the jumper.
- There are 2 Aministrator Fingers. The administrator can do all the things that Master can do. The Master can delete the Administrator, but the Administrator can not delete the Master.

11.0 B100-SA PROGRAMMING MENU

11.7 Settings



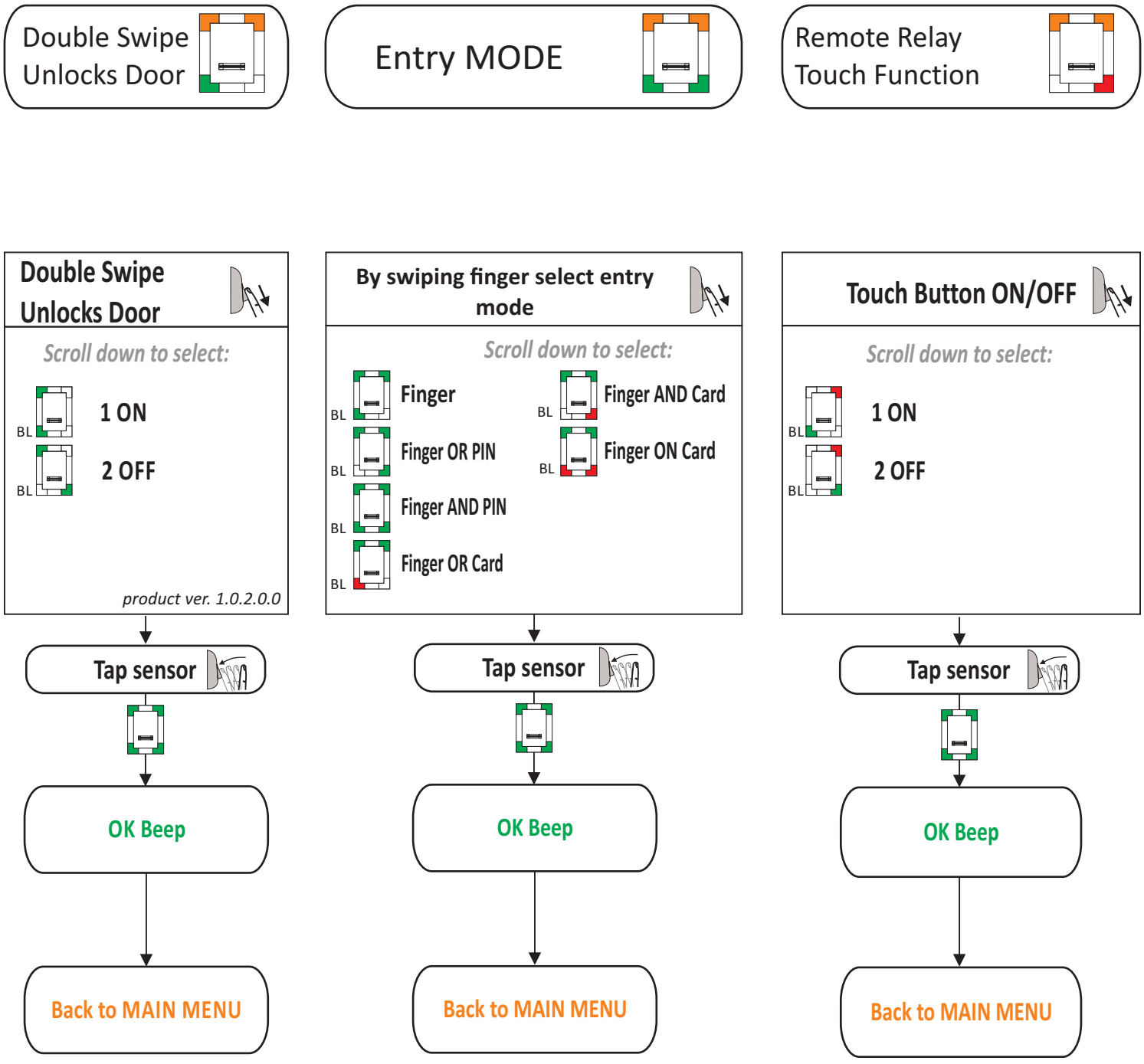
NOTE:
Swipe UPWARDS to exit the MENU

***Entry Mode** - used when additional proximity or keypad reader is connected*
***Remote Relay Touch Function** - Enabling/Disabling the Touch Button Function in the remote relay Unit*
***Buzzer** - Enabling/Disabling the Buzzer*
***Backlight** - Enabling/Disabling the Backlight*

11.0 B100-SA PROGRAMMING MENU

11.7 Settings

11.7.1 Double Swipe Unlocks Door, Entry Mode, Remote Relay Touch Function



Note:
Refer to Chapter 10 for this feature

NOTE:
Swipe UPWARDS to exit the MENU

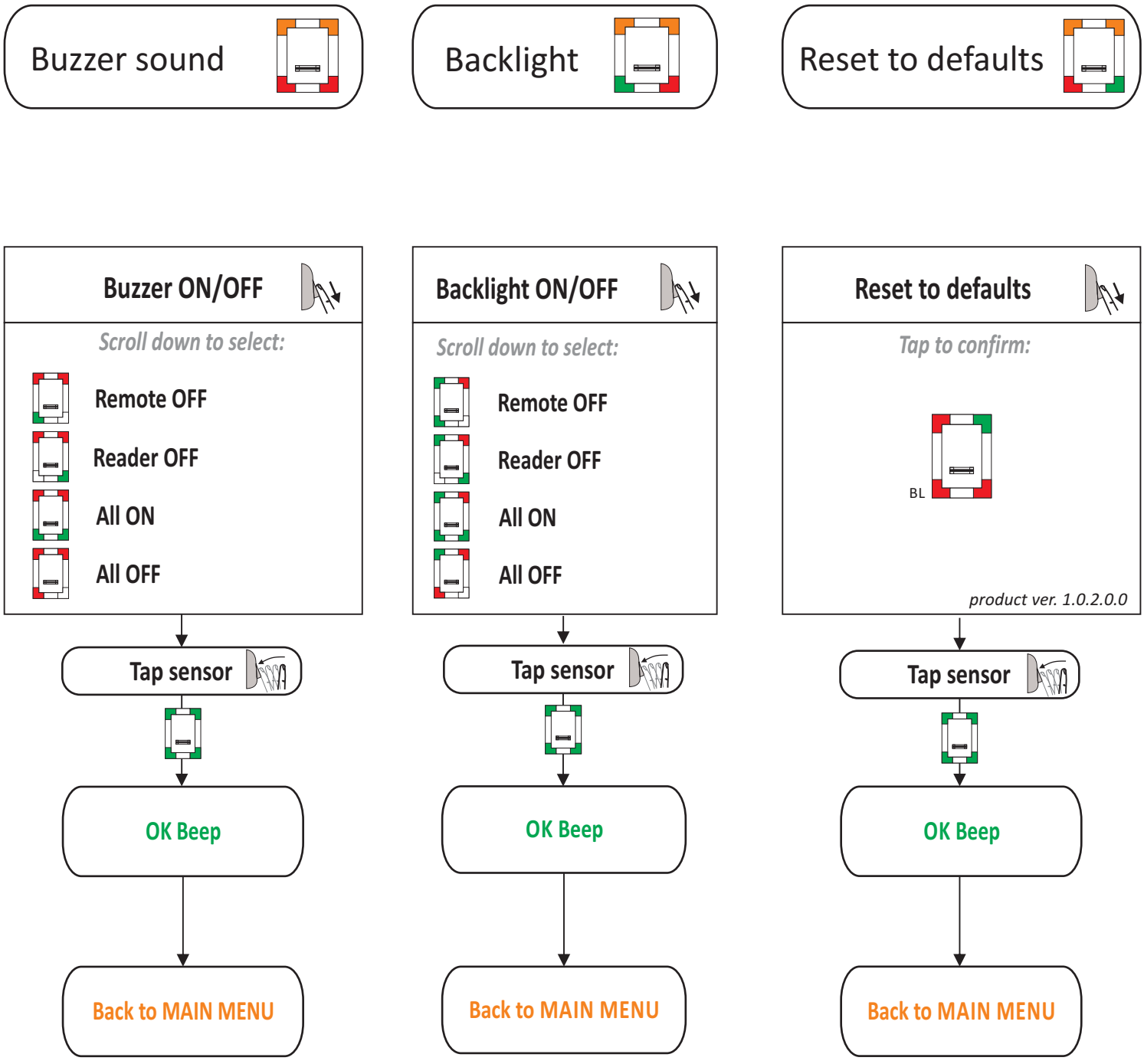
Example:
Task: Set the Reader to work in "Finger and Card" mode

Scroll Master Finger 10 times, tap, scroll twice, tap, scroll 4 times, tap, swipe UP to exit.

11.0 B100-SA PROGRAMMING MENU

11.7 Settings

11.7.2 Buzzer Sound, Backlight, Reset to defaults



Note:
Does not affect the fingerprints stored and the pairing

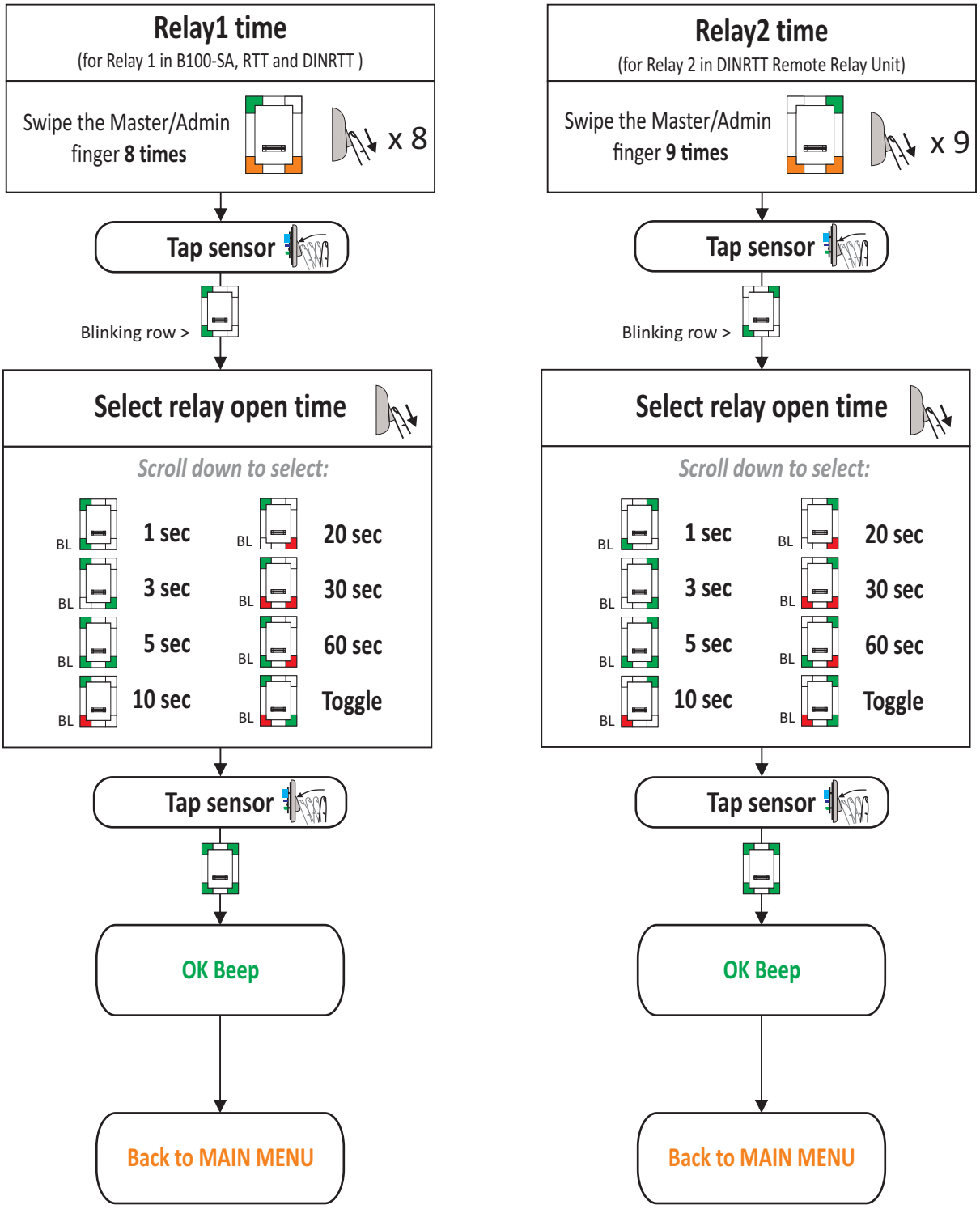
NOTE:
Swipe UPWARDS to exit the MENU

Example:
Task: Put the Buzzer OFF.

Scroll Master Finger 10 times, tap, scroll 4 times, tap, scroll ones, tap,, swipe UP to exit.

11.0 B100-SA PROGRAMMING MENU

11.8 Set Door Relay Time



NOTE:
Swipe UPWARDS to exit the MENU

Example:
Task: Put Relay1 to stay activated 10 seconds.

Scroll Master Finger 8 times, tap, scroll 3 times, tap, swipe UP to exit.

This product herewith complies with requirements of EMC directive 2014/30/EU. In addition it complies with RoHS directive EN50581:2012

Visual Plus Corporation, s.a.

Drève Richelle 161
WOP G - Bte 34
1410 Waterloo - Belgium